

## Cylindrocladium Leaf Spot of *Callistemon*<sup>1</sup>

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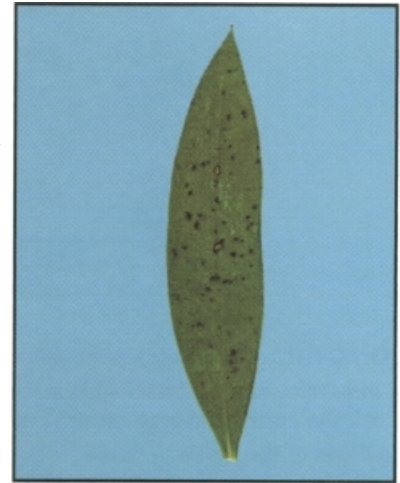
**INTRODUCTION:** The genus *Callistemon* (Myrtaceae), native to Australia, is comprised of 30 species (Mabberley 1989) of low shrubs to trees. They are grown for their vividly colored (white, cream, yellow, pink, mauve, red or purple) bottlebrush-like flowers (Everett 1981; Huxley 1992). A sample of *C. rigidus* R. Br. (stiff bottlebrush) with leaf spots (Fig. 1) was submitted in February 1997 to the division's Plant Pathology Section for diagnosis. The red-flowered *C. rigidus* is a slow-growing shrub up to 20 feet high and 10 feet wide.

**SYMPTOMS:** Brown, pinpoint leaf spots (< 1 mm across) were observed on *C. rigidus* from a Florida nursery. When an excised branch of *C. rigidus* was spray-inoculated with the causal agent, symptoms appeared within 3 days in a



**Fig. 2.** Inoculated *Callistemon rigidus* branch showing symptoms caused by *Cylindrocladium colhounii*. (Photography credit: J. Lotz)

moist chamber at room temperature (El-Gholl *et al.* 1997). Symptoms included brown, pinpoint spots occurring on both leaf surfaces, sunken blotches, and blight (Fig. 2) (El-Gholl *et al.* 1997). Four days following inoculation, some of the leaf spots had enlarged to 1 mm across while a few had coalesced to form larger lesions. The causal agent was consistently reisolated from symptomatic tissue.



**Fig. 1.** Inoculated *Callistemon rigidus* leaf showing spots caused by *Cylindrocladium colhounii*. (Photography credit: J. Lotz)

**CAUSAL AGENT:** The fungus consistently isolated from the leaf spots was identified as *Cylindrocladium colhounii* Peerally. A recent publication documents the first report of this pathogen in Florida and the first report of this disease on *C. rigidus* (El-Gholl *et al.* 1997). Conidiophores of *C. colhounii* have a single filament (Fig. 3A). Conidia are cylindrical, hyaline, (1-) 3-septate, and rounded at both ends (Fig. 3B). The filament is septate, hyaline, and terminates in a narrowly clavate vesicle (Fig. 3C). Perithecia of *Calonectria colhounii* Peerally (sexual structures) were produced within 3 weeks on peanut (*Arachis hypogaea* L.) stem-water agar. Initially, the perithecia were yellow in color (Fig. 4) (an important taxonomic feature), turning orange to red as they matured. The asci in the perithecia contain 4 ascospores.

It is too early to tell how serious this pathogen may prove to be on *C. rigidus* in Florida. Since *C. colhounii* has a relatively wide host range (El-Gholl *et al.* 1997) other flora in Florida may also be at risk.

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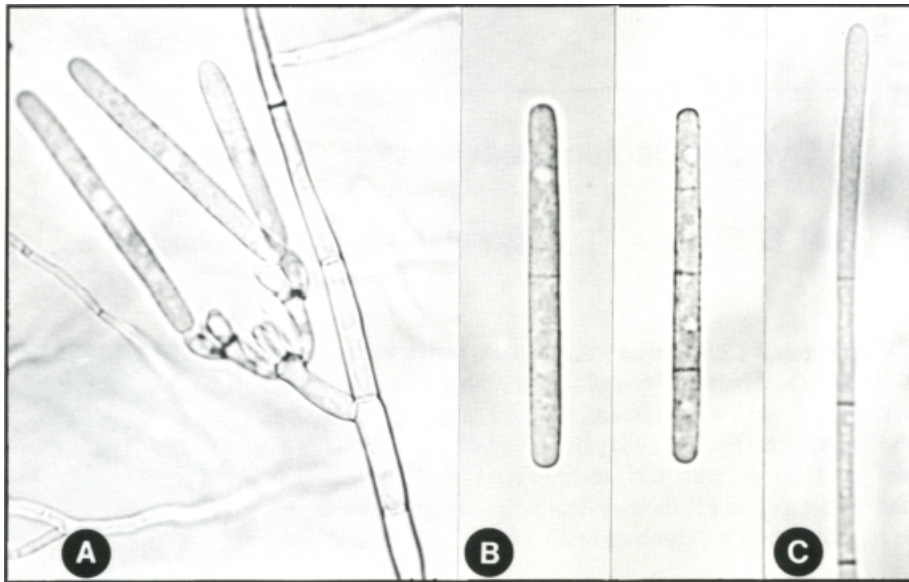


Fig. 3. *Cyindrocladium colhounii*. A) Conidiophore showing a single septate filament X640. B) Cylindrical conidia X640. C) Narrowly clavate vesicle X640. (Photography credit: Pathology Files)

**CONTROL:** If chemical control is warranted, thiophanate methyl, iprodione, or mancozeb may be tried (Simone *et al.* 1998). Prior to applying any pesticide, check the current label to ensure compliance with regulations concerning the legal use of the product.

**SURVEY AND DETECTION:** Look for brown, pinpoint leaf spots.



Fig. 4. Yellow perithecial mass of *Calonectria colhounii* among conidiophores of *Cyindrocladium colhounii*. (Photography credit: J. Lotz)

## LITERATURE CITED

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